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quently found covered with vegetable mould from 6 inches to 2 feet deep, of a pretty good quality, particularly in the deep ravines, where the ferns and grass have grown, died, and rotted, through distant periods of time. With this exception, there is no other soil, except what has been artificially made, as at those places where rice and other vegetables are cultivated.

The agriculturists of Hong-Kong use the common Chinese wooden plough, drawn by bullocks or buffaloes; and their other agricultural implements are like those used on the main land. Their threshing-floor is made on the first convenient spot outside their farm-house; the ground being smoothed, is afterwards covered with lime, and beaten flat. The grain is sometimes trodden out by cattle, and at others threshed with a flail, quite like our own, except that one piece revolves on a pin with a head, which is fastened into the side of the other. Some of the labouring women wear a hat like the usual Chinese one, but it has a blue nankin curtain, of 5 or 6 inches deep, sewn round the edge of the rim, to keep off the glare from the face.

A small winnowing machine, turned by the hand, on the same principle as our own, is used for clearing the grain of its husk after it has been threshed.

VI.—*On Chinese and European Maps of China.* Addressed by
Mr. WILLIAM HUTTMANN to the Council of the Royal Geographical Society.

MY attention having been called to a paragraph in your President's last anniversary address, on the desirableness of a new map of China, and your Secretary having recommended me to send to the Society a sketch of the history of Chinese cartography, and a brief notice of the best materials for the compilation of a new map of that empire, I presume now to submit to the consideration of the Council a short account of the principal maps of China and its dependencies that have been compiled either by natives or Europeans, and to suggest what I think would be the best mode of obtaining an improved map of the Chinese empire.

The Chinese have had comparatively good maps of their own country for more than four centuries. The Kwang-yu-too, a large atlas of China, was compiled by Choo Sze Pun, who in 1311 and 1312 visited every part of his native land to render his work correct. This Atlas has been enlarged and improved by various editors, and several editions of it have been published—one of these, dated 1615, was presented to the Royal Asiatic Society by Sir George Thomas Staunton, together with a very large collection of valuable works relating to China, in the Chinese and other lan-

guages, and appears in the catalogue of that Society's Chinese library under the title 'Extensive Maps and Drawings, in four volumes.'

It was from an edition of this work—probably the one above referred to—that the Jesuit missionary, Martini, selected the provincial maps that form his 'Novus Atlas Sinensis,' printed at Amsterdam about 1655—and although many particulars comprised in the Chinese original are omitted in Martini's Atlas, D'Anville says in his 'Mémoire sur la Chine,' (pp. 25, 26,) "that the Chinese originals do great honour to China, and prove the superiority of the Chinese, as geographers, over every other Asiatic people."

Although the maps executed by the Chinese before the eighteenth century were better than those of other Asiatic, and even of some European nations, they were not constructed on the scientific principles that are now adopted in surveying and mapping. A new era in Chinese geography commenced, however, in the reign of the Emperor Kang-he, who had his empire surveyed by Jesuit mathematicians, and their map engraved in the Chinese and Manchu languages—China Proper being in the former, and Chinese Tartary, Thibet and Corea, being in the latter language. A copy of this map is in the East India Company's library in London, which also contains a MS. Italian translation of some of the sheets in which the coasts are delineated.

The history of this survey is so fully detailed in Du Halde's 'China,' and in Mailla's 'Histoire générale de la Chine' (tome xi. pp. 314-317) as to supersede the necessity for giving it here. This survey is well known to have formed the basis of D'Anville's 'Atlas de la Chine,' which is, however, by no means a complete and exact translation of the original; but for this that eminent geographer is not responsible, as no doubt is entertained that, except in the general maps, he closely followed the tracings and translations that were sent by the Jesuits from China.

In D'Anville's particular map, which includes the peninsula of Leaou-tung, the part of that peninsula which descends below lat. 40°, and has been called by English geographers, since the date of Lord Macartney's embassy, the Prince Regent's Sword, is omitted, apparently without the editor being conscious of the defect. As the southern part of that peninsula, with the islands in its vicinity, are, however, given in Kang-he's survey, M. Klaproth supplied the deficiency in the map which accompanies his 'Notice sur l'Archipel de Jean Potocki,' as he named the cluster of islands S.E. of the Prince Regent's Sword. It is a remarkable fact that although M. Klaproth chiefly compiled the generally good map that is appended to Biot's 'Dictionnaire des Villes

dans l'Empire Chinois,' the name of that archipelago, of which in one sense he was the discoverer, is omitted.

The extension of the western frontier of the province of Szechuen from the river Ya-lung to the Lan-tsang Keang, which is laid down in M. Klaproth's map of the route from Ching-too-foo to Lhassa, that accompanies his 'Description du Thibet,' is not noticed in M. Biot's map, it having probably not been introduced into it by M. Klaproth, who does not appear to have been acquainted with this accession of territory till after 1828, as he then made the river Ya-lung the Chinese boundary in his 'Carte du Cours Inferieur du Yaron Dsang-bo-tchou.'

Messrs. Klaproth and Biot have also neglected introducing the addition made to Kan-suh, which now includes Barkhul, Urumthsi, and the surrounding country. This is surprising, as these places are included in a map of Shen-se (Kan-suh not having then been separated from that province), published in the 'Ta-tsing-hwuy-t'een' (chap. lxiii. p. 3), as early as 1764.

Since the publication of Kang-he's 'Survey,' great additions have been made to the Chinese empire—the conquest of Calmuck Tartary and Little Bucharía, which was completed in 1759, extended the empire to the Belor Mountains, W. of Cashgar and Yarkand; and the survey of these regions was executed by Fathers Spigahu and Rocha, between 1756 and 1760. I have met with a reference to a new survey of the country between the Great Wall and those mountains, by Fathers Hallerstein, Erpinha, and D'Arrocha, made between 1768 and 1773, but have not seen it. This new survey is, I believe, the basis of M. Klaproth's four-sheet map of Central Asia, published at Paris in 1836.

Spigahu's 'Survey' furnished the means of correcting the location of towns, &c. in Sungaria and Eastern Turkestan, which were very inaccurately placed in Kang-he's map. The position of Hami (Khamil), and even of Thurfan, are given with tolerable correctness in that map, as they had for some time formed part of the Chinese territories; but W. of these places the longitudes from Peking are much too low. For instance, Yarkand, in Kang-he's 'Survey,' is placed $32^{\circ} 40'$; while its longitude, observed about 1759, is $40^{\circ} 10'$: and Cashgar, which is placed in $34^{\circ} 10'$, is really $42^{\circ} 25'$ W. of Peking. E-le, the former capital of the Eluths, is not given in Kang-he's map, although the river on which it stands is properly placed. Its Chinese name is Hwuy-yuen-ching; it is the present capital of Sungaria and Little Bucharía, and the well-known place of exile for Chinese criminals. Its position is N. lat. $43^{\circ} 56'$, long. W. from Peking $34^{\circ} 10'$.

Spigahu and Rocha's 'Survey of Calmuck Tartary and Eastern Turkestan' is included in a new edition of Kang-he's map that was engraved by order of the Emperor Keen-lung about 1761,

in ten very long rolls, comprising above 100 sheets. A copy of this splendid but incorrect work, which for brevity I will call 'Këen-lung's Map,' was presented in 1825 to the East India Company's library in London by Mr. John Reeves, then of their establishment at Canton. This map includes not only the Chinese empire but also the whole of Northern Asia; but much better maps of Asiatic Russia have been published at St. Petersburg. The names in China Proper are in Chinese, and in the other parts of the map in Manchu. I have translated for the Hon. East India Company the whole of the Manchu, and a considerable part of the Chinese division of this map, which is much more extensive and detailed, but less correct, than Kang-he's. The principal faults in it are the boundaries between the Russian and Chinese empires not being marked with sufficient clearness; the names of places in China Proper, which are thrice as numerous as in Kang-he's map, being in very small characters, and in many instances much crowded; and, what is of much more importance, as it greatly diminishes its value as an authority, the longitudes, particularly at some distance from Peking, being generally too high, although in Manchuria they are frequently too low.

The meridian lines in Kang-he's map are curved, and in Këen-lung's strait, which might cause erroneous placement in parts where no observations were made; but as the differences in longitude between these maps do not increase or diminish regularly in proportion to their distance from Peking, the first meridian, this does not show the cause of the errors in Këen-lung's map, especially when it differs from the observations taken by the Jesuit mathematicians.

The longitudes of Yarkand and Cashgar were, as has been already remarked, settled about 1759—the former being $40^{\circ} 10'$, the latter $42^{\circ} 25'$; but in Këen-lung's map the former is $41^{\circ} 15'$, the latter $43^{\circ} 25'$. In Këen-lung's map the most westerly part of Yun-nán is $24^{\circ} 20'$, while in Kang-he's it is only $19^{\circ} 5' W.$ of Peking; and Ching-too-foo, the capital of Sze-chuen, is placed 2° too far W. by Këen-lung; Ching-shan-wei, near the eastern point of Shan-tung, is placed in Këen-lung's map $7^{\circ} 40' E.$ of Peking, but its true situation is $6^{\circ} 30'$.

While these longitudes are all too high, those in Eastern Tartary are too low. Ning Ku tha, which is placed in Këen-lung's map $12^{\circ} 10' E.$ of Peking, was found by Kang-he's surveyors to be $13^{\circ} 15'$; and Tonton Kashan, which was apparently the most easterly point they settled by observation, is $19^{\circ} 58'$, yet in Këen-lung's map it is only $16^{\circ} 25' E.$ of Peking.

Kang-he's and Këen-lung's maps being frequently referred to in this paper, it seems desirable that their respective scales should

be mentioned, and as D'Anville's '*Atlas de la Chine*' is generally known, it may be stated, that Kang-he allows about one-third more, and Këen-lung about one-fourth more space to a degree of latitude and longitude than D'Anville.

I have a notice of a new map of China Proper, finished in 1782, by Fathers Hallerstein, Erpinha, and Andrada. In this map, which I have not seen, China, including Shing-King, or Mukden, is divided into 19 provinces, and subdivided into 496 districts. This map was probably published to include the survey of Sze-chuen, &c., made by order of the General A-Kwei, after the conquest of Kin-chuen and the Meaou-tsze in 1775, as before that date the western parts of Sze-chuen and Yun-nan, and many districts in Kwei-chow, Kwang-se, &c., were scarcely accessible to the Chinese.

It is not unlikely that the map of 1782 is referred to as being in preparation, in a letter dated Peking, July 27, 1775, printed in the '*Mémoires concernant les Chinois*,' tom. ii. p. 417:—"The reigning emperor (Këen-lung), to remedy the defects of the ancient charts (Kang-he's), which were on too small a scale to admit of the introduction of all the towns, had them extended to 100 large sheets (probably Këen-lung's map); but when they were printed he found the names so crowded, and so many garrisoned towns omitted, that he immediately ordered them to be re-engraved on a larger scale."

The subjugation of the Meaou-tsze, in 1775, extended the province of Sze-chuen above 2° in a westerly direction. Prior to that conquest, the Ya-lung-Keang, about 15° 30', formed the boundary of Sze-chuen on the eastern frontier of Thibet, which is now formed by the river Lan-tsang, above 18° W. of Peking. The old boundary is, however, still retained in the most modern European maps of China—even those compiled by good Chinese scholars, such as the Rev. C. Gutzlaff's, prefixed to his '*China Opened*,' and the larger, but less beautiful map that accompanies his '*Sketch of Chinese History*.'

There is also, in the library of the East India Company, in Leadenhall Street, an atlas of China Proper, divided into 17 provinces (Keang-nan forming only one instead of two, as it should have done), printed in the tenth year of Kea-King's reign (1805). I have referred to this atlas in an article '*On Countries favourable to the Growth of Tea*,' inserted in the '*Asiatic Journal*' for December, 1822, in which I suggested its cultivation at Serinaghur in British India; but as it is superseded by more recent and more complete atlases of the Chinese empire, I shall only remark here, that, although useful in some respects, it is disfigured by the adoption of the vulgar or abridged forms of the Chinese character.

Within the last twenty years, two or three new maps or atlases of the Chinese empire have been published by natives of China, based on the surveys of the missionaries, and correctly graduated. One of these, according to the 'Chinese Repository' (vol. ix. p. 64), was published, in 1832, by Li-yang-hu, on a broad-sheet, 11 feet by 8, with the lines of latitude and longitude. The editors of the 'Repository' add, "It is the best native work we have seen, being, in some respects, superior to the MS. one of Li-tsing-che." A copy of this map having been sent to the Royal Library at Paris, in 1843, M. Biot has described it, in the 'Journal Asiatique' (4^{me} serie, tom. i. p. 279), as being a reprint of the Jesuit missionaries' maps, with the addition of the country formerly occupied by the Meaou-tsze, and the correction of the names and extent of the districts in China which had been changed since the reign of Kang-he. I am not aware of a copy of this map being in England, although one could easily be procured from Hong-Kong; but Mr. Plowden, formerly president of the Select Committee at Canton, and now one of the directors of the East India Company, brought from China a valuable map of that empire, in the Chinese language, compiled by Le-ming-che, who was well acquainted with the European principles of geography. As this map, which was published about 1825, contains much information that would be useful in the compilation of a new map of China, and Mr. Plowden obligingly allows it to be submitted to the Society for inspection this evening, some notice of it may perhaps be interesting. This atlas comprises one general and forty special maps, with six folio pages of introduction, containing a geographical epitome of China and its dependencies. It is entitled 'Ta-tsing wan nêen yih tung king wei yu too,' *i. e.* 'A General Map of the Ta-tsing (Chinese) Empire.' The maps vary in size according to the number of degrees of latitude and longitude comprised in each province or district—about one inch being appropriated to each degree of longitude, and about an inch and a quarter to each degree of latitude. A separate map is given of each of the eighteen provinces into which China is now partitioned, instead of the fifteen that existed when Kang-he's survey was made—Keang-nan having subsequently been divided into Keang-Soo and Gan-hway, Hoo-Kwang into Hoo-pih and Hoo-nan, and Shen-se into Shen-se (sometimes called Se-gan) and Kan-suh. A supplementary map of this last province is given, containing the desolate tract extending from the Kea-yu gate in the great wall to beyond the 28th degree of longitude W. of Peking, which was added to Kan-suh in the early part of Kêen-lung's reign. This supplement includes part of the great sandy desert called Sha-mo, or Han-hae, by the Chinese, and Cobi by the Manchus and Mongols; and the districts formerly

called Barkhul and Urumthsi, but now named, by the Chinese, Chin-se-foo and Te-hwa-foo.

The province of Shing-King, of which Mukden, or Fung-tëen-foo, is the capital, has a special map; and the country bordering the river Hih-lung (called Sahalian by the Manchus, and Anur by the Russians) has four: two for the district of Kirin, or Ning-Kut ha, on the coast, and two for Hih-lungkeang, or Thsithsikar, in the interior.

The province of E-le, comprising Sungaria and Eastern Turkestan, has also four special maps: one for the district of Hwey-yuen-ching (E-le), one for the country round Hami and Thurfan, one containing Kutchay and Aksu, and one including Ho-thean, Cashgar, and Yarkand.

Two maps are devoted to Inner and four to Outer Mongolia; one each to the districts of Khopto, Tsing-hae, Han-hae, Tchahar, and Uliasutae, and two to Thibet; but as these merely carry the Thibetian rivers to the southern frontier of that country, they do not assist in settling the question whether the San-poo, or great river of Thibet, joins the Brahma-putra or the Irawati. I however confidently expect that when the country between British India and the province of Yun-nan is explored by European geographers, the San-poo will be found to form the principal branch of the Irawati instead of being the main feeder of the Brahma-putra. This problem, which is of importance not only as connected with the establishment of an interesting geographical fact, but also as bearing upon the question whether communication could not be maintained between Bengal and China by means of rivers, instead of by the Strait of Malacca, particularly at the shifting of the monsoons, seems to be worthy of investigation by the British or British-Indian Government.

Corea is not included in the map under description, but is given in both Kang-he's and Këen-lung's maps, with the names in Manchu letters, and in the map of 1832, with the names in Chinese characters. If it should be considered desirable to publish a map of Corea as part of a new Chinese atlas, the names of the towns, &c., could be given from Corean authorities, according to the Corean pronunciation; and the positions of the islands, and the outline of the coast, could be corrected from European navigators, on whose authority that kingdom might be reduced in size, if it has really been extended 2° too far S. in the Chinese maps.

A slight inspection of this collection of maps will show that the undue space allotted to mountains and rivers, the imperfect mode of laying down the coasts and islands, and the want of care in locating cities, &c., in their true positions, would prevent its being adopted as the groundwork of a new map of China. For this, Kang-he's map, with the subsequent surveys, should be adopted.

Le-ming-che's map would, however, be of very great value in furnishing the present names and rank of the Chinese cities, and the boundaries of the existing provinces, with their division into foo or counties. In addition to this, it gives the names of many towns belonging to the aborigines, or foreign colonists, in Kansuh, Sze-chuen, Yun-nan, Kwei-chow, Kwang-se, &c., and the locations of the Calmuck, Mongolian, and Manchu banners or tribes in Tartary, which are not generally included in Këen-lung's map. It is also the only work I am acquainted with that gives the towns, &c., in the tract of country formerly called Se-fan and Tu-fan, lying between the Ya-lung and Lan-tsang rivers, which has been incorporated with China since the publication of Këen-lung's map.

Although Le-ming-che's atlas furnishes so much valuable information, its giving the names of places in Manchuria, Mongolia, Sungaria, Eastern Turkestan, and Thibet in Chinese characters, which are singularly ill adapted to the expression of foreign names, renders its orthography unsuitable, except for China Proper. Russia he calls O-lo-sze; the Thurguths, Too-urh-hoo-ti-r; the Ortus, Ohuh-to-sze; the Buriats, Poo-loo-tih; and the Kirghiz, Kih-urh-kih. He also calls Sairim, Sa-le-muh; and Ushakthal, U-sha-kih-tha-lih.

The language of Thibet abounding in double consonants, both as initials and finals, while the Chinese language admits no double consonants as initial sounds, and only *ng* and *n* as consonantal finals, it may readily be imagined that Thibetian names expressed by Chinese characters can scarcely be recognized. Këen-lung's map giving them in Manchu letters has rendered their identification considerably easier; but some peculiarities in the orthographical system of the Manchu language prevents its expressing Thibetian names with precision.

As giving places in our maps the names by which they are known to the natives is of great importance, it is a fortunate circumstance for geography that the Emperor Këen-lung had an hexaglott geographical dictionary of Sungaria, Eastern Turkestan, and Thibet printed in 1763. This work, which merits translation, is entitled 'Se-yu-tung-wän-che,' and is in the Chinese, Manchu, Mongol, Calmuck, Thibetian, and Turkestani languages and characters. It would enable any person who can merely read these characters to settle accurately the native names of places in these three countries, of which we have scarcely any recent accounts, except that furnished by Mir Izzet Ullah, which has been translated by Professor Wilson, Director of the Royal Asiatic Society, and elucidated by his profound and varied knowledge.—(See 'Journal of the Royal Asiatic Society,' vol. vii. art. xxxi.)

In relation to the materials within our reach for the construction

of a new map of the Chinese empire, the preceding remarks prove that neither Këen-lung's nor Le-ming-che's maps can be taken as the basis; but that the survey made by the Jesuit mathematicians in the reign of Kang-he must be adopted; adding to it the surveys subsequently made in Sungaria, Eastern Turkestan, and the western provinces of China. Upon these should be engrafted the valuable surveys of the Chinese coasts made a few years since by the East India Company, and more recently by the Admiralty, all the information that is worth extracting from Le-ming-che and other modern Chinese geographers, and such materials of undoubted authority as may be gleaned from publications like Klaproth's maps of the route travelled by a Chinese officer, between 1786 and 1790, from Ching-too-foo to Lhassa, and of the course of the Yarou-dsang-bo-chou; and Timkowski's map of the route from Kiakhta to Peking, which is not laid down in either Kang-he's or Këen-lung's map.

As I have mentioned Kang-he's survey as the best foundation for a new map of the Chinese empire, it is necessary to establish its claim to be adopted as a guide in delineating the general features of the country, and for placing the towns, &c.

The Jesuit mathematicians who were employed in conducting that survey were undoubtedly well qualified for their task, and had every needful facility afforded them by the Chinese government; and the general correctness of their observations may be inferred from their very nearly agreeing with those that late occurrences have enabled Englishmen to make. I have compared the latitudes and longitudes of several places as given from recent observations in Mr. Walker's chart of the coast of China from the Canton river to the Yang-tsze-keang with those given in Kang-he's map, and find the difference never to exceed a few minutes, which difference may be accounted for by the improvements made since Kang-he's reign both in instruments and processes of observation.

If it should be remarked that it would be injudicious to adopt as the foundation of a new map of China a survey that is confessedly wrong sometimes several minutes in the location of places, I should coincide with that remark if there was the slightest probability of our obtaining a more correct general basis; but this is quite hopeless. The Emperor of China is not at all likely to have his empire re-surveyed; and the idea that he would allow any European government to send a corps of geographers to survey it for him, if even the English or French should be willing to incur the enormous expense such an undertaking would occasion, is too preposterous to be seriously entertained for a single moment. We have then no alternative but adopting Kang-he's survey as the basis of a new map, or allowing our

maps of China to remain in their present state of great incompleteness and inaccuracy.

Happily we possess the means of improving Kang-he's map by adding the information furnished by Spigahu, A-kwei, and recent Chinese geographers, and of correcting some of its errors from the English surveys of the coasts, and from a table of latitudes and longitudes of many places in the empire that was published in 1818 in the Ta-tsing-hwey-tëen, and which sometimes differ a few minutes from Kang-he's positions. This table, besides giving the situations of the provincial capitals, furnishes the latitudes and longitudes of about 120 places in Manchuria, Mongolia, Sungaria, Eastern Turkestan, and Thibet, and of 17 in Kin-chuen, that formerly belonged to the Meaou-tsze. If 50 of these are added, as new observations, to the 620 places whose positions were fixed by Kang-he's surveyors, and the 43 by Spigahu are included in the account, there will be a total of more than 700 points fixed by observation in the Chinese empire, forming a much better foundation for a new map than exists for any Asiatic country except British India.

Of the general correctness of the survey by the Missionaries, Mr. Davis, who visited Peking in 1816, and has lately left England to assume the government of Hong Kong, speaks in the following laudatory terms:—'In the Chinese Library of the East India Company at Canton is a MS. map chiefly compiled from the labours of the missionaries, and its extreme accuracy can be vouched for with respect to those parts of the empire through which Lord Amherst's embassy passed.'—('Trans. of the Royal Asiatic Society,' vol. ii. p. 90.)—The same gentleman also, in communicating to the Royal Asiatic Society the translation of a Peking Gazette relating to the war of 1826 in Western Tartary, accompanied by a fac-simile and translation of a Chinese map of its seat, adds the following note:—'Cashgar is very correctly laid down in the MS. map of Chinese Tartary made by the Missionaries. This MS. map corresponds in a surprising manner, both in respect to latitudes and longitudes and the names of places, with our own maps.'

The statements in this paper show the imperfection of even the newest and best maps of the Chinese empire published in European languages, and that abundance of excellent materials for the construction of a new and comparatively perfect map of the Chinese dominions exist either in England or in China, whence they could easily be obtained. The only point that remains unsettled is who should defray the expense of compiling and engraving such a map or atlas.

Had the connection of the East India Company with China continued, there is scarcely any doubt that, with their accustomed

liberality, they would have defrayed the expense; and even now, although that connection has been dissolved, it is not at all improbable that they would afford pecuniary assistance in the execution of such a work, especially as their territories approximate to the Chinese empire both on the north and east.

Although her Majesty's Government does not usually aid such undertakings, yet the great political and mercantile interest this nation has in China may perhaps induce the ministry to afford assistance in the publication of so useful an auxiliary to our commerce as a good map of China. Many individuals also, who are desirous of promoting geographical knowledge, would be likely to contribute funds towards the publication of such a work if it should be undertaken by your Society. Neither should this fact be overlooked, that it is almost certain that the proceeds of the sale in Europe, America, and China would ultimately repay a considerable proportion, if not even the whole, of the outlay.

VII.—*On the Isthmus between the Lake of Granada and the Pacific; being an Extract from a "Memoir on the Lake of Granada, the River San Juan, and the Isthmus between the Lake and the Pacific Ocean, in the State of Nicaragua, Central America."* By Mr. J. BAILY, Lieutenant of Marines, H.P.

[In the years 1837-38, the Lake of Granada (sometimes called of Nicaragua), the River San Juan, flowing out of it to the Atlantic at the port called San Juan del Norte, in lat. $10^{\circ} 56' 45''$ N., and long. $83^{\circ} 43' 14''$ W. of Greenwich, and the isthmus lying between the lake and the port, called San Juan del Sur, on the Pacific, in lat. $11^{\circ} 15' 37''$ N., and long. $85^{\circ} 52' 56''$ W., were surveyed by Mr. Baily, at the request and under the authority of General Morazan, then President of the Central American Republic, for the purpose of ascertaining the practicability of forming a communication for shipping between the Atlantic and Pacific Oceans. The results of this survey Mr. Baily has kindly communicated to the Society; but previous to the arrival of his memoir, the 'Nautical Magazine' for 1840-41 had published a very valuable account of an 'Excursion to the Lake of Nicaragua, up the San Juan,' by Mr. George Lawrance, assistant-surveyor of H.M.S. Thunder, Commander E. Barnett; and as the two accounts are, in many parts, exactly similar,* we are under the necessity, in order to avoid repetitions, of confining ourselves to a selection, from Mr. Baily's paper, of that portion only which may be regarded as supplementary to Mr. Lawrance's—namely, that which describes the country between the Lake of Nicaragua and the Pacific, which Mr. Lawrance merely passed over.—ED.]

THE Port of San Juan del Sur on the Pacific, in lat. $11^{\circ} 15' 37''$ N., long. $85^{\circ} 52' 56''$ W., is small but sufficiently commodious

* Mr. Lawrance acknowledges himself greatly indebted to Mr. Baily for much of his information.